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Discussion papers submitted by major groups

Note by the Secretariat

Addendum**

Youth and children discussion paper on water, sanitation and human settlements***

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** The submission of the document was delayed to allow full consultations among relevant stakeholders.

*** Prepared by the Commission on Sustainable Development Youth Caucus in consultation with youth networks. Specific case studies on water, sanitation and human settlements, can be found on the Internet at: http://groups.takingitglobal.org/WSSD-YouthCaucus/docs. The views and opinions expressed do not necessarily represent those of the United Nations.

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Water and sanitation

I. Introduction

1. By 2050 at least one person out of four is likely to live in a country affected by chronic or recurrent shortages of freshwater. Some 6,000 children die every day from diseases associated with lack of access to safe drinking water, inadequate sanitation and poor hygiene. The future will be the present for the youth of today. This is why we are more and more active in organizing networks and youth projects, and why we continue to shout to try to get your attention.

2. The youth and children major group would like to begin by noting that we are all already aware of the importance of water and sanitation in sustainable development and the reduction of poverty, this already having been identified as being of critical importance at Rio de Janeiro, Johannesburg and countless other meetings and conferences over the years. We hope that this session of the Commission on Sustainable Development will not be just another occasion to restate the already agreed upon urgency surrounding this issue, but rather that it will focus on what government actions are taking place in order to actually achieve the Millennium Development Goals.

II. Why youth and children are concerned

3. The youth and children major group is particularly concerned about this issue because:

(a) Water shortage problems that we talked about 10 years ago are emerging as we speak. Countries with water shortages have even more problems, while countries that had no water shortages are starting to experience problems of their own, including water shortages in summer months and problems relating to the pumping of groundwater, etc.;

(b) Water pollution is occurring. Our lakes and rivers increasingly contain a cocktail of chemicals, runoffs, untreated waste and many other substances that have a direct, long-term effect on the health of our children;

(c) Increasingly, conflicts will develop over water, conflicts that we will have to face in the future, not you. Although there have not yet been any wars for water, at the rate we are going, they will come. We are here now to make sure that an already foreseeable problem does not come about;

(d) Youth and children are often the most concerned with water shortages and sanitation, which affect the health and well-being of our young people and their ability to attain a certain age or get the proper education needed in order to create a better world;

(e) Youth and children represent more than 30 per cent of the world population and in most cases are never given a voice. However, it is the youth of today that will be playing important roles in these meetings tomorrow.

III. Developments and challenges

4. The need for better water governance locally, nationally, regionally and globally is critical, and it is a challenge since the current water crisis has often arisen more from poor governance than from water scarcity. Good governance in the water sector means sound management and involves stakeholder participation, transparency and accountability.

5. Ensuring environmentally sustainable water supply and sanitation services for human settlements, including urban dwellings, remains a challenge, notwithstanding major investments in water supply and waste-water treatment over the past three decades in many countries.

6. Trans-border mega-development projects, involving big dams, oil and gas exploration, railways and other infrastructure, indiscriminate and destructive mining, inappropriate land use, industrial agriculture and urbanization, have made access to water for the poor a luxury. Poor water quality and deplorable sanitation remain the bane of the existence of the world's marginalized communities.

7. Rural communities do not consider water and sanitation a priority area. Social mapping in Svuure, Zaka district, Zimbabwe, showed that people were very much concerned with issues such as food and roads, while water and sanitation were not of primary concern. There is a great need to educate rural communities on the importance of water and sanitation.

8. The scepticism surrounding the empowerment of youth through full disclosure of plans, programmes and policies is still a problem at the local, national and regional levels. An attitudinal change has to occur soon if youth is to play a more meaningful role in sustainable development.

9. Over 24 billion hours are lost each year in caring for those with diarrhoea. The situation has been observed to be particularly acute in developing countries, and children are particularly affected.

10. Treating diseases caused by poor sanitation, unhygienic practices and unsafe water supplies costs the equivalent of about $20 billion every year, and the burden is especially pronounced in developing countries.

IV. Some youth-led developments

11. Capacity-building workshops and seminars have been organized by youth and senior water experts from ministries. The objectives of these meetings have been to address the gap between young water professionals, youth and senior experts. Youth groups have managed to establish a working relationship with the Ministry of Rural Resources and Water Development in Zimbabwe.

12. The Botswana youth water teams have established a three-tiered structure for youth to participate in awareness workshops for integrated water resources management. The first tier is a network of young people aged from 13 to 18 with an interest in water issues. The second group is young people at the tertiary education level also with an interest in water issues. The third group is young water professionals — young people who are already working or who are attached to institutions.

13. Exchange study tours have been successfully implemented within southern Africa, and to date the Botswana, Swaziland and Lesotho youth water teams have participated. The objective of these tours is to share ideas and initiate constructive debate on water-related issues, sanitation and the environment. Guest Lecturers and senior water experts are also invited to share their knowledge.

14. The Lesotho Youth Water and Sanitation Campaign is a means to maintain the focus on awareness, advocacy and communication within the region for sustainable livelihoods. This is an opportunity to involve young people in the attainment of the sanitation target set at the World Summit on Sustainable Development (Johannesburg, 2002). It is a challenge for young people to lobby for community awareness, support for sanitation and political will for this important cause and to present its case at the twelfth session of the Commission on Sustainable Development.

15. The International Year of Freshwater (coordinated by the United Nations Educational, Scientific and Cultural Organization and the United Nations Department of Economic and Social Affairs) put together a network of youth-led water initiatives around the globe, a network which will continue to expand and work with the United Nations in the upcoming Decade for Action, "Water for Life", and Decade for Education for Sustainable Development.

V. Lessons learned, trends observed and obstacles to overcome

A. Providing tools for action

16. Governments are not alone in having to take action towards sustainable water use. Many different groups in society, youth in particular, are active and want to get involved. But in many instances they lack the tools to do so (access to information, resources, funds, means, etc.). We consider that:

(a) An effort should be made to provide more opportunities and tools to different groups of society so that they can organize themselves to help their communities have access to water or consume less water;

(b) Mechanisms and programmes that facilitate the sharing of and easy access to information for all groups are crucial, whether through Internet technology or other means.

B. Involving youth in the process

17. Youth are the initiators of change. We can transfer our knowledge to our own peer group, but also to those people closest to us, our families. By using this bottom-up approach, a greater awareness of water-related problems would come about in local communities and, in the long term, in the international community. Youth have the ability to create fresh, innovative ideas and the capability to implement them.

18. Youth are organized, and networks of young people around the globe, working at the local level, continue to develop. These groups, although they have the human resources and manpower to change their communities, do not have access to appropriate funding or the capacity to implement those programmes. Youth groups

around the world are becoming increasingly active and aware of the issues. Youth are inspiring other youth around the world, with little funding and a lot of professionalism. This is definitely a resource to tap into.

C. Involving all groups in the process and the search for solutions

19. On the basis of experiences in a number of countries, a multi-stakeholder partnership at the various levels of society among the various governmental, non-governmental, business and private sector organizations and institutions that are taking initiatives for programmes and projects on water, sanitation, human settlements and sustainable development in general is indeed one of the successful strategies.

20. Youth is defined in Agenda 21 as the only transitional sector, meaning that all young people will eventually graduate to join the main sectors of society. Youth is therefore the key to the sustainability of leadership for a developed and sustainable world. Hence, it is vital that young people, as leaders of today and tomorrow, be trained and equipped to the process of ensuring a sustainable world.

21. Youth and children, as a group, are currently part of, and will become the leaders of and active participants in, all other groups of society. In order for them to make a difference in the future, the work described below needs to be done now.

22. Youth will be the future governments and delegations. Governments repeat the same statements in many different languages over and over at these meetings. Some recognize the importance of issues but do not want to have to deal with them; others try to cover up the issues with technical details. Take strong positions on these issues and encourage your ministries countries and local governments by offering them opportunities and resources to get involved in participating in the fulfilment of promises that you have made internationally;

(a) Youth need to be part of official delegations, as well as young national leaders who are working to make a difference;

(b) Youth need to be consulted and involved in the development of government positions and policies before, during and after these meetings.

23. Youth will be the future leaders in business and industry. Business and industry increasingly have a major role to play in sustainable development, not just because they can offer financial resources and expertise, but because they are huge consumers of water, and often make decisions to save money by polluting the environment and building dams;

(a) Business schools need to focus on educating future leaders in business and industry to incorporate sustainable development in all of their policies, whether profitable or not;

(b) Work must be done now so that when the youth of today are leaders in this field, the concepts of "the polluter pays", sustainable development, etc., are mainstreamed in the business world, business mentality and business studies;

(c) Tools and incentives must be provided for industry to use water resources efficiently, including strict laws at the local, national and international levels against pollution, etc.

24. Young women of today will be the educated women leaders of tomorrow. Water shortages and domestic chores mean that young women around the world have less education and fewer opportunities. Women should be enabled to have a proper education or to develop their full potential to contribute to society. Education for women and access to water will provide a huge impetus towards attaining the goals set in many countries around the world.

25. Farmers, as major consumers of water, have a very important role to play in water management. As more and more young people are turning away from life on the farm and moving to cities, traditional farming is being replaced by mega-farms which often consume more water and pollute more;

(a) The new generation of farmers needs to be educated about water issues as they relate to their profession, and information should be made available to farmers;

(b) Government incentives and subsidies should be made available to encourage farmers to make environmentally friendly decisions and to encourage the continuation of traditional and family farming.

26. Young indigenous people have learned from their elders to respect their environment and water. New generations of indigenous youth should not lose this, and they should share it with others around the world. We all, and not just indigenous peoples, should feel this closeness to our lands and pride in our resources;

(a) Listen and learn from the indigenous people of today so that we do not lose the wealth of water-related knowledge;

(b) Revive traditional community-specific water management systems, and/or incorporate them into existing practices.

27. Youth will be the scientists of tomorrow. Young scientists should be encouraged and trained to focus on finding solutions for sustainable development in science, concentrating on creating environmentally friendly solutions to water problems.

28. Youth will be the local authorities of tomorrow. Change needs to occur simultaneously at the national level and the local level. Local authorities have incredible power to do work in their local communities. As they can take into consideration the people, conditions and culture specific to their area of authority, they are very important actors in the promotion of sustainable development;

(a) Local authorities should be educated on issues of water and sustainable development and trained in how to facilitate the use and management of water;

(b) Paragraph 170 of the Johannesburg Plan of Implementation, on the setting up and strengthening of local youth councils, should be implemented to ensure and train the future leaders and officials of local government.

29. United Nations agencies have an important role to play, as their programmes should be coordinated to provide expertise, resources and projects and to encourage dialogue with various groups of society and Governments for the fulfilment of the Millennium Development Goals;

(a) Provide indicators and resources for Governments and work on capacity-building and providing information for Governments and various groups of society;

(b) Develop programmes and put resources into the programmes already in place to help implement Agenda 21, achieve the Millennium Development Goals, etc.;

(c) Continue the work with youth started during the International Year of Freshwater and carry it on into the Decade for Education for Sustainable Development and the Decade for Action, "Water for Life".

30. In order to reach the Millennium Development Goals on water and sanitation, all of these groups need to work together and sit at the same tables. Each group has an expertise that is needed to reach the solutions; no group can be left out.

VI. Focus areas

A. Poverty eradication

31. Access to water and sanitation is of great importance for the fight against poverty, but these goals are rarely incorporated into poverty reduction strategies. Issues affecting the supply of and equitable access to freshwater and adequate sanitation should be better integrated in the national poverty reduction strategies.

B. Changing unsustainable patterns of production and consumption

32. Education for consumers, business and industry and farmers is crucial for changing unsustainable patterns of consumption of water and its use in production. Government regulations and incentives should be put into place to ensure this.

C. Means of implementation

33. Governments must maintain and develop international environmental law protecting freshwater through the prompt ratification and efficient creation of international treaties. Additionally, cooperative initiatives must be provided through education and the implementation of a favourable legal and economic framework for access to environmental information and public participation. In this way water will become a driving force for the mobilization of civil society.

34. Water is a public good. Water cannot be sold for profit and industries should not benefit from the poor. International financial institutions should promote local water cooperatives and should not make private sector involvement a precondition for funding.

D. Gender equality

35. In many countries, girls spend as long as three hours a day fetching water, an energy expenditure representing more than one third of their daily food intake. In schools, when water is needed, it is girls who are sent to fetch it, taking time away from their studies and play. Household chores — such as fetching water — keep many girls out of school or seriously affect their performance at school.

36. Africa's girls are hardest hit by poor water and sanitation situations. Many are kept at home to do domestic work, including care of the sick and water collection. As many as 20 million girls in Africa — 1 out of 10 — may be deprived of an education in this way. Those who go to school often drop out soon after puberty because of lack of safe, clean and private sanitation facilities.

E. Education

37. Since the 1992 United Nations Conference on Environment and Development, the international community has recognized the vital link between access to quality education and the health and well-being of the international youth community, as well as the need for capacity-building and consciousness-raising. The word "education" appears over 600 times in Agenda 21, second only to the word "government". As we enter the Decade for Education for Sustainable Development and the Decade for Action, "Water for Life", we urge that new resources continue to be developed for teachers, students and youth in the formal and informal education community.

38. The Southern Africa Region Vision for Water, Life and the Environment advocates for a future in which there is equitable and sustainable utilization of water for social and environmental justice, regional integration and economic benefit for present and future generations. This vision clearly stresses and recommends the involvement of youth. This in itself shows the need to establish and support more youth-based associations.

39. The major challenge for many countries, especially the developing countries, in respect of youth is to ensure that they are given enough opportunities in life. Decisions made at the top often adversely affect those at the bottom; hence the great need for a bottom-up approach.

40. Computer technology and Internet access should be maximized as a means of promoting consideration of water and sanitation issues. The education system, from the primary to the tertiary level, should train new generations to be water managers. Teachers should also be trained and educated on water issues and sustainable development; access to teacher-training workshops on water should be supported and promoted.

VII. Policy directions

41. Education on water issues, such as conservation and the need to treat water as finite, non-renewable and vulnerable, should be considered a prerequisite to improve health care and sanitation. Youth actions should be taken into account in the implementation of such educational programmes.

42. Water and sanitation issues should be prioritized, securing their integration into Poverty Reduction Strategy Papers, Millennium Development Goals reports, national sustainable development strategies and other national plans.

43. Appropriate links should be developed between national, regional and youth organizations on water management issues. Appropriate indicators should be developed to reflect the importance of water for sustainable development and

poverty eradication, and good practices relating to water and sanitation should be compiled.

44. A participatory approach involving all stakeholders and ensuring good communication and coordination among all actors should be promoted so that development decisions reflect the concerns of all and so as to encourage cooperation between governmental, non-governmental and private sector activities.

VIII. Conclusions

45. In the Framework for Action on Water and Sanitation, a comprehensive list of action areas, indicative targets and milestones and examples of activities needed to reach them was compiled. At this session of the Commission on Sustainable Development we should focus on developing work such as this instead of starting, yet again, from the beginning and analysing, yet again, Agenda 21, which we all know by heart by now. With only two sessions to discuss the issue, we need to go directly to the point.

46. Youth and children's focus is on education at all levels, both informal and formal, and on water and sanitation for sustainable development, as access and education regarding water in all disciplines will train a new generation not only to be efficient water users in their professions and lives, to create sustainable policies in their governments and to wash their hands to prevent disease, but also to develop a water culture that will be crucial in the future protection and appreciation of this vital resource.

Human settlements

IX. Introduction

47. The overall human settlement objective is to improve the social, economic and environmental quality of human settlements and the living and working environments of all people, in particular the urban and rural poor. Such improvement should be based on technical cooperation activities, partnerships among the public, private and community sectors and participation in the decision-making process by vulnerable groups such as women, the elderly and children, who are our future leaders. The need for acceptable human settlements has been extensively discussed in Agenda 21.

48. Human development is one of the main objectives of sustainable development. But what is the actual situation on the ground in 2004, 12 years after the Earth Summit in Rio de Janeiro, followed by other related conferences? How has Agenda 21 been implemented on the ground? Have living standards been improved? Do people have basic amenities? The situation, particularly in developing countries, is humiliating, morally degrading, pathetic and oppressive.

49. Expectations raised at previous conferences have not been fulfilled. A lot of people still lack access to at least decent accommodation. Anne-Marie Sacquet has written that inequality is intolerable from the point of view of our common humility, and in the long term, it threatens social and economic structures.

50. The 2002 *World Atlas of Sustainable Development* estimated that by 2025 the world's total urban population will have doubled, reaching 5 billion (6 of every 10 human beings).

51. In 1996, at the United Nations Conference on Human Settlements in Istanbul, it was estimated that at least 1 billion people worldwide did not have a suitable place to live and that over 100 million were homeless. It is quite important for all Heads of State to realize that poor housing has catastrophic effects on the general welfare of people in any context. In urban areas, particularly in developing countries, this has resulted in the sprouting of squatter slums. Such slums in Zimbabwe, for example, are poorly serviced in terms of basic amenities such as clean water and sanitation, among others. The health of the people, especially children with a weak immune system, is adversely affected. There is pollution and no privacy. Crime rates are quite high in these squatter settlements. In Zimbabwe, squatter camps around Harare have been declared dangerous areas that are off limits especially to visitors, where survival is for the fittest.

52. It is in most cases women and their children who bear the worst living conditions in such places, while men go on drinking sprees. Many households headed by women are also very vulnerable to eviction by city authorities, and very few can stand up and defend their interests.

53. The United Nations Millennium Declaration recognizes the dire circumstances of the world's urban poor. The present worldwide slum population, if its growth goes unchecked, will multiply threefold by 2050.

54. In Asia, only 3 per cent of public funding is set aside for management by local communities, compared with an average of about 40 per cent in industrialized countries.

55. A new approach to development is required at this juncture. Action-oriented schemes need to be seriously put in place. The problems at hand need to be tackled head-on. The major question to be addressed is, Why are all these problems persisting and rising to unbearable levels in developing countries? Why are women and youth particularly in danger? The answers might appear to be simple, but the situation is more complex on the ground. Once these questions are addressed with open minds from both angles, then the concept of sustainable development can be realized.

56. As a point of departure, there is a greater need to seriously consider the dual role of women. The position of men, women and youth in all spheres of society needs to be considered to identify their specific potentials, aspirations and practical and strategic needs.

57. Human settlement development has largely underemphasized, if not altogether ignored, two basic roles that women play on behalf of society. Women have both reproductive and productive roles and are often overburdened by society. Their unpaid, labour-intensive activities are seldom considered real work, yet they are crucial for human survival.

58. It is very important for the Commission on Sustainable Development to note that poor living conditions have adverse effects on the health of society as well as on the reproductive performance of women and on the quality of upbringing of their children. Consequently, children, who are potential future leaders, are caught in a

vicious circle, along with other groups such as women, indigenous people, the elderly and the disabled.

59. These approaches should form the core principles of national settlement strategies. In developing these strategies, countries will need to set priorities among the eight programme areas in accordance with their national plans and objectives, taking fully into account their social and cultural capabilities.

60. Furthermore, countries should make appropriate provisions to monitor the impact of their strategies on marginalized and disenfranchised groups, with particular reference to the needs of women and children.

61. In industrialized countries, urban consumption is placing severe stress on the global ecosystem, while settlements in the developing world need more raw materials, energy and economic development simply to overcome basic economic and social problems. In many developing countries, government has established housing schemes to serve the people, but there are loopholes that have made these schemes a dismal failure. One simple issue that governments have ignored is gender analysis. This goes beyond viewing the community from the standpoint of physical deprivation, addressing structural issues within the community. In identifying and addressing only physical needs, there is a risk of creating problems for some gender groups or even marginalizing them, particularly, women and children.

X. National housing policy

62. The national housing policy in Nigeria was launched in 1991 in response to the global strategy for shelter recommended in Agenda 21. It is aimed at achieving sustainable human settlement development. However, housing development policies are skewed in favour of those in the middle and upper income brackets. Proposed housing development for the poor is either insufficient or is hijacked by the rich, and thus children are not catered for at all. The poor cannot afford the cost of acquisition, let alone offer collateral security.

XI. What needs to be done?

63. It is difficult to highlight specific obstacles facing women and children in the context of human settlement policies and programmes, an area often perceived by planners as affecting all people equally irrespective of gender. However, the impacts of current economic and spatial policies can be shown to be particularly negative for the poor, and it is women and children who are worst affected as a result of misguided policies and programmes. This points to the urgent need to ensure:

(a) A gender-sensitive approach in the development and implementation of all policies, including housing policies. A gender-sensitive approach will generate data that is disaggregated by gender, class and age;

(b) The adoption of an integrated approach to the provision of water, electricity, sanitation, drainage and solid waste management;

(c) Appropriate implementation and monitoring of master plans for major towns where they exist, and preparation and implementation of new ones where they are non-existent or out of date;

(d) Improved rural economies through the development of cottage and agro-allied industries to create job opportunities for rural dwellers, and thereby stem the tide of rural-urban migration;

(e) That at least 75 per cent of rural communities are provided with social amenities to stimulate and sustain self-reliant development to curb rural-urban migration;

(f) The encouragement of private sector and community participation in activities relating to urban renewal, housing and infrastructure;

(g) The establishment of a national human settlement data bank to provide baseline information that can be used to better plan for sustainable human settlements;

(h) The promotion of easy access to land, especially for low-income families;

(i) An improved revenue base for human settlement management.

XII. Policy directions

64. Governments are not alone in having to take action for the provision of acceptable infrastructure; youth need to be given ample support in all their endeavours, be it through the contribution of ideas or enabling them to acquire the best education. However, government policies are crucial instruments for socially equitable, economically viable and structurally efficient development. To this end, it is very important for governments to develop policies that are transparent and gender sensitive.

65. There is a great need to upgrade squatter settlements through the provision of basic infrastructure and services. The beneficiary communities must have an active role in this. They must contribute in any way possible, and in fact they must be initiators of development. This will reduce donor dependency syndrome.

XIII. Conclusions

66. Governments should implement all protocols signed and implement all agreements based on Agenda 21.

67. The various regulatory bodies, which include the Federal Environmental Protection Agency and the Department of Petroleum Resources, should be strengthened so as to regulate the practices of oil companies in the Niger delta. There should be an increase in tree-planting, and the Government should jump-start a participatory approach to housing the poor through a joint effort by the public and private sectors as well as the community.

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Contribution by business and industry on freshwater, sanitation and human settlements*

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* Prepared by the International Chamber of Commerce (www.iccwbo.org) and the World Business Council for Sustainable Development (www.wbcsd.org); the views and opinions expressed do not necessarily represent those of the United Nations.

I. Introduction

1. Water is central and vital to all life. However, still over a billion people are living without access to safe water supplies and sanitation is minimal for over one third of the planet's population. Awareness is growing that water is a renewable but scarce and precious resource, which must be carefully managed if future water crises are to be avoided.

2. In many communities, particularly among the rural poor, families spend a very high proportion of time and/or income obtaining water to meet basic needs. Growing competition for water, in quantity and quality, threatens advances in poverty eradication, public health and food production.

3. According to the Food and Agriculture Organization of the United Nations (FAO), agriculture is by far the biggest water user, accounting for some 70 per cent of all water withdrawals. In comparison, industry accounts for 20 per cent, while domestic use is limited to 10 per cent.

4. "Business-as-usual" will not meet the needs of those currently un-served, let alone ensuring water for a burgeoning population that could grow by as many as two billion more people in the next 25 years. It will be difficult to achieve water security unless the commitment is made, the resources are provided, and all stakeholders, including those who are currently powerless, are involved in decision-making over allocation, use and benefit. Meeting the minimum targets of global water security by 2025 is estimated to require a doubling of the present investment in water to some US$ 180 billion per year — an impressive but not unrealistic requirement.

5. The water challenge calls for collaboration across all sectors of national economies as well as across political boundaries. National water action agendas need to be created with the active participation of stakeholders. In many countries, the challenge is so enormous that Governments cannot, and should not, seek solutions in isolation, but should work in partnership with local communities, relevant non-governmental organizations and the business sector. Employers and entrepreneurs are key actors in economic development, with a significant influence on employment creation, growth and sustainability, and the ability to help remove the water and sanitation barriers to development.

II. Recommendations to policy makers

Create an enabling environment

6. Essential ingredients in a national water policy include: a basic water law; adequate commercial legal systems; and a regulatory framework that is flexible and encourages devolution to the lowest levels of government possible. This will require capacity-building so that the appropriate government agencies (primarily local authorities) have the competence to negotiate contracts and establish appropriate guidelines from a position of equality with entrepreneurs of all types. Government agencies and trained regulators are needed to ensure that operators' performance complies with the requirements, irrespective of whether these operators are from the public, private or informal sectors.

Remove barriers

7. The following barriers are examples that inhibit delivery of water services to the poor:

- Inadequate land tenure for many of the urban poor
- Political interference by placing inappropriate individuals in water delivery organizations
- Failure to recognize new technologies (water treatment, pipe materials, etc.)
- Poorly managed, trained and paid employees.

8. Business supports employee education and training to improve productivity and provide the management skills required. High-risk financial environments with uncertain legal systems make investment unlikely, from both public and private sources. Wherever safe piped water supplies are unavailable, point-of-use water treatment and safe storage should be implemented immediately. This will extend the life-saving benefit of safe water to vulnerable populations until permanent water treatment and distribution systems can be established.

Build partnerships

9. Public versus private is not the issue. The challenge is to maximize efficiency, whatever structure is chosen. New innovative partnerships could include: large multinational corporations and/or large public sector water operators working with smaller local partners; partnerships with local water sellers; fountain or well operators; and vendors of all sorts.

Recognize that water has immense value for everyone

10. Costs, both capital and operation and maintenance, must be covered by any sustainable water service delivery mechanism. Most of the public, including the poor have demonstrated a "willingness to pay" for fresh drinking water. Valuation and pricing should be negotiable between providers and users of water. Individuals must be convinced that the prices they are paying are reasonable and affordable.

11. In this regard, government regulators must have the capacity and ability to protect the public interest as well as to ensure that investors and service providers are fairly compensated for the services they provide. The process by which prices are set must be open and transparent. Water valuation is also a mechanism for encouraging conservation and curtailing wasteful use of this precious resource.

Catchment management and planning

12. Water resources development and management should be planned for a hydrological unit such as a drainage basin as a whole or for a sub-basin. Catchment planning should take into account surface and groundwater for sustainable use incorporating quality and quantity aspects as well as environmental considerations. All projects and proposals should be formulated and considered within the framework of an overall catchment management plan, keeping in view the existing agreements/awards for a basin or a sub-basin so that best possible combination of options can be selected and sustained.

III. United Nations Millennium Development Goals

13. The Millennium Declaration aims at halving, by the year 2015, the proportion of people without sustainable access to safe drinking water. It also called for stopping "the unsustainable exploitation of water resources by developing water management strategies ... which promote both equitable access and adequate supplies".

IV. World Summit on Sustainable Development

14. The 2002 Johannesburg Plan of Implementation reiterated the above commitment and went further still, adding a similar goal for access to basic sanitation services.

15. The key business messages on water from the World Summit included:

- Business supports the sanitation goal and has played a role in promoting it
- Water issues are at the very core of poverty. Industry has been advocating sanitation goals and supports the new goal to halve the number of people without access to sanitation by 2015
- Industry has a critical role to play in providing innovative and least-impact collection, treatment and distribution of drinking water, as well as sanitation
- Human impact on water supply is evident through the different "footprints" of economic activity and also of poverty
- The provision and maintenance of water supply and sanitation can save communities money, while at the same time protecting health, improving quality of life and "freeing up time" desperately needed for other activities. But water and sanitation provision do require cost recovery — appropriate infrastructure requires high levels of investment and ongoing operations and maintenance must be adequately funded to ensure service and preserve the value of assets. The sustainability of this basic service to address poverty means it must be a user pays or government-funded service.

V. Developing strategies for sustainable water resources management

16. Businesses, domestic consumers and farmers are the primary users of freshwater. Adequate water must be left in the natural environment to protect ecosystems and biodiversity. Agriculture remains the largest water consumer, and in many developing countries, irrigation accounts for 90 per cent of overall water demand. Although efficiency of freshwater consumption by business is improving, the effluent of some operations may impact freshwater availability. The business sector, therefore, has opportunities and responsibilities to make a major contribution to freshwater availability in a number of ways:

- Actively protect water resources
- Reduce the amount of water it uses per unit of production

- Reduce water effluents from its operations
- Reduce water losses (leaks) in pipe conveyance systems
- Promote the efficient and responsible use of its products with the goal of reducing negative impacts of its products on water quality and quantity.

17. The business sector clearly has a growing role to play in the supply and management of water resources. Many member companies of the International Chamber of Commerce (www.iccwbo.org) are adopting innovative approaches to protect water resources, reduce water consumption, reduce water losses, recycle and reuse water, and minimize effluents in water discharged into the environment. Furthermore, many industries are increasingly mitigating the impact of their products during use — the fertilizer industry is seeking to minimize the impacts of plant nutrients on waterways and detergents manufacturers are adapting formulations and developing new products, recognizing differing standards for waste water treatment and environmental sensitivities of water catchments.

18. Nestlé Waters, the water business of Nestlé, applies robust water resource protection measures that extend to the whole catchment area — over 10,000 hectares in the case of the Vittel and Contrex springs in France — where an observation network continuously monitors surface waters and controls activities in the catchment area, with the ultimate objective of avoiding any adverse impacts to the water resource and to protect the ecosystem.

19. RWE Thames Water actively manages water resources across a large part of the Thames catchment. In the United Kingdom, the company provides water and sewage services to approximately 13 million people in the Thames Valley. This is a highly shared catchment, with more than 75 per cent of the public water supply derived directly from the River Thames and its tributaries, and the remaining 25 per cent from groundwater. On average, over 55 per cent of annual effective rainfall in the catchment area is abstracted for human use. The annual per capita availability of water is just 265 cubic metres while the United Nations definition of water scarcity is anything less than 1,000. This has led RWE Thames Water to develop novel management techniques such as recharging aquifers with treated water during periods of high availability which can then be recovered during periods of drought.

20. The plant science industry, represented by CropLife International, is actively seeking to research, develop and refine agricultural technologies that address water management issues. For example, new seed varieties are being developed, including with modern plant biotechnology, which are drought resistant or require less water through stress tolerance, representing a significant potential for critical changes in agricultural production in dry regions. In addition, crop protection products that keep crops healthy are important tools to render crop production more efficient, including in terms of water usage.

21. A developing country example is demonstrated by Eskom — the energy utility in South Africa. Since the 1970s the limitations of the water resources of South Africa have motivated Eskom's engineers to find ways to conserve water in the predominantly coal-based power generation utility. The most effective of the solutions devised is dry cooling, which uses 15 times less water than conventional wet-cooled stations. This technology was introduced by Eskom, resulting in two of the largest dry-cooled power stations in the world, which save over 200 million

litres of water per day that would normally be lost through evaporation (www.eskom.co.za).

VI. Sustainable consumption strategies

22. The efficiency of business and industry's consumption of water generally has been improving. However, there is still scope for major impacts on water availability. Many corporations are designing new plants that maximize use of recycled water and minimize discharges to very low levels. A previous winner of the Stockholm Water Award, General Motors de Mexico (www.gm.com.mx) actually takes in saline water from the aquifer and cleans it up to drinking water standards before use. Any water discharged is cleaner than that from the local aquifer. This cycle of innovation works best when business is dynamic and constantly turning over and modernizing its capital stock.

23. Business and industry has a self-interest in conserving water, for sustainability and economic reasons and to prevent water scarcity which would act as an impediment to its operations. It also has a broader interest in fresh water supply and basic sanitation services wherever it operates, going well beyond guaranteeing continuous supply and limiting water pollution from its operations, and recognizing that a clean environment and fresh water are key to sustainable development and poverty alleviation. Business is also involved in numerous stewardship initiatives beyond its own activities, to create awareness of sustainable use of water in local communities, through education, knowledge-sharing and capacity-building.

24. Another important strategy for conserving water resources is demand management. Careful management and optimization of water use is a significant contributor to water resources management under a limited supply scenario. The availability of water may increasingly become a determinant in business decisions regarding future investments, and business has recognized that it must cooperate with all other water users within a river basin or catchment area. The business community widely accepts the concept of "integrated water resource management".

VII. Equitable access and affordable supply of water for the poor

25. Communities without adequate access to water networks are seeking to strike a balance for their own water consumption, reconciling a vital need for affordable water with the household budget. Financial investment is needed to expand the infrastructure required to extend access to water and sanitation. However, the financial resources are often out of the reach of local governments, particularly in many developing countries. The challenge lies not only in the level of investment required, but also in the sound management of the utilities, including coverage of both capital and operational costs, through appropriate tariffs and/or stable fiscal revenues. Another challenge is to ensure equitable access to these services, based on the needs and interests of all members of a given population, who must be represented in the decision-making process.

26. Nevertheless, examples of innovative solutions do exist. These include the policies of the Government of South Africa. In 1994 an estimated 14 million people

in rural areas of South Africa had inadequate access to safe water and some 21 million people did not have access to a basic level of sanitation. Acknowledging that access to water and sanitation is crucial for the eradication of poverty and underdevelopment, the Government faced up to the challenge by implementing the Community Water Supply and Sanitation programme and the Free Basic Water policy. The latter stipulates that households are entitled to up to 6,000 litres of clean water every month at no cost. The free basic water policy is a collaborative effort by all spheres of government to expedite the delivery of a basic service to all. Since the inception of the programme in 2000, 49 per cent of the poor have been served (www.dwaf.gov.za).

27. There are many current examples of the inadequacy of managing water and sanitation services, which emphasizes the need to develop innovative solutions. These solutions include new institutional models, cost-effective technologies including durable pipe technologies, and appropriate tariff structures within a social context that recognizes the needs and abilities of all stakeholders.

28. While the universal provision of safe piped water supplies is the ultimate objective for drinking water, hundreds of millions of people are years or decades away from having reliable access to safe water supplies. Point-of-use water treatment and safe storage taken as an interim step is one of the most achievable and cost-effective public health interventions available. One point-of-use system designed by the United States Centers for Disease Control and Prevention has been successfully used in a number of countries since 1990. The United States Centers for Disease Control and Prevention Safe Water System consists of three components: disinfection using a dilute solution of chlorine bleach (sodium hypochlorite); safe water storage, using a 20-litre plastic container with a spigot and narrow mouth to prevent hands from touching the water (residual bleach also continues to work as an antimicrobial agent); and community education.

29. The monthly cost of the bleach is only US$ 0.15 to $0.30 per household, making this an option within reach of all communities. Water supply programmes and policies should support and facilitate the immediate adoption of these practices, wherever appropriate, to reduce mortality and suffering, and begin to create the enabling environment for investment and economic development.

VIII. Support for community development

30. Future users need to be closely involved in the decision-making process related to the choice of level of service, technology to be used, and payment options. They should also be closely involved through community participation in the construction of the infrastructure and its management. Promoting an environment of cooperation and effective relations between the service operator, the communities involved, and local governments, creates a sense of ownership within the target community. This fosters conditions of security during the execution of work and subsequent maintenance stages. It also creates adequate conditions for services payment and permits the integration of underprivileged households into the regular system. This activity is usually conducted with the participation of non-governmental organizations or community associations, which act to ensure that lessons learned from a project can be replicated and made part of governmental policies.

IX. Institutional framework

31. Governments should be encouraged to formulate national and subnational strategies for the water sector. Strategies should meet requirements for integrated water resources management and include adaptation and modernization of institutional, legislative and regulatory frameworks, improvement of knowledge of resources and uses, and training in service management and equipment maintenance. Well-designed and appropriate tariff structures are essential to provide an adequate basis and environment for investment. The elements of a comprehensive water strategy apply to all parties. They include:

- Conservation and wise use of the resource base
- Water catchment and sub-basin management to allocate scarce resources most effectively
- Management of underground water and aquifer systems
- Phasing out of inappropriate subsidies which encourage unwise use of scarce water resources
- Strong national and corporate governance as a necessary framework for business investment.

32. The private sector, when involved in the management of public utilities, has shown its capacity to provide efficient water services. However, private sector involvement in the public sector may require institutional reforms that allow stakeholders to work together for more effective management of water systems. Financial practices must be realigned to support the sustainable use of water resources.

X. Cost-effective technologies

33. The service provided through traditional technologies often turns out to be too expensive for low-income communities. Choice of technology needs to take into account equity, sustainability, gender equality, and the safeguarding of basic rights and the ecosystem, within a context of water use efficiency. Initial cost alone must not remain the only driving factor in technology choice. Innovative design of water and sanitation networks can allow up to 50 per cent savings in the construction costs, which in turn can be applied to connection fees.

34. For example, the "condominium approach" has been used for some projects in order to reduce the cost of access to service. Under this approach, households in a neighbourhood organize and agree to work together, providing their labour for excavation and filling work, as well as maintenance of the system once it is complete. To keep costs down, "condominium" systems might use smaller pipe diameters, and pipes are buried in shallow trenches run through household lots or under sidewalks. The cost of condominium water connections has been shown to be about half that of conventional systems.

35. Satisfying the growing demand for irrigation water in the agriculture sector presents a major challenge in countries like India. In some cases, treated effluent can be supplied for irrigation purposes and more research should go into this aspect. For example, Chennai in the south of India, has been facing a water crisis for several

years. Since 1992 Chennai Petroleum Corporation Limited has met its water demand by treating domestic sewage from the city municipality, using reverse osmosis, and then using the treated water in its plant operations.

XI. Appropriate tariffs

36. Charges for water and related services must, in aggregate, reflect the true value of water resources and the infrastructure needed to extract, clean, deliver and take away water after use as well as consider both the current and future cost of service provision. Water should not be wasted, and the waste and/or pollution of water must bear an economic cost. Based on the premise that water is a free or subsidized good, water tariffs have been kept at an artificially low level in many countries. Consequently, many water utilities have been faced with insufficient financial resources to make the necessary investment in new areas of emerging urban growth, or even to maintain existing infrastructure. This has resulted in a degradation of the service.

37. Ultimately, local consumers must pay for water services. They can pay through taxes but then there is no guarantee that these government revenues will not be diverted to other "higher priority" public service provisions. Alternatively, they can pay through a rate structure that is designed to capture the full cost of the operation, including recovery of capital investment. A rate structure can be designed to provide "below cost" rates to the poor for water for basic needs. These subsidized rates are then offset by "above cost" rates to affluent and commercial users, who use larger quantities of water. An alternative would be for the local government to pay water bills for the very poor with other users paying the full cost of the service. In addition, microcredit programmes could be integrated, offering small loans to households so they can pay for new or more efficient plumbing fixtures. Appropriate tariffs are needed whether the service is provided by the public, the private sector or by creative partnerships of the two.

XII. Public-private partnerships

38. Partnerships between public authorities (defining the conditions and level of the service), private companies (responsible for providing the services complying with contract norms and country regulations), and other stakeholders (representing consumers, communities, employees, etc.) can make a major contribution towards sustainable management of water systems. Collectively, industry has the technology and management skills required to implement agreed water strategies, but all sectors must cooperate if society is to minimize adverse effects associated with emerging freshwater shortages.

39. There is no inherent reason why the public sector cannot deliver services as effectively as the private sector. However, for a wide range of reasons, the performance of many public sector water utilities has been inadequate. Systems have been allowed to deteriorate because funds were not available for proper maintenance. Billing and collection rates have been poor. Worker training has been neglected. In some cases the number of employees far exceeded benchmark norms for service. As a result some have called for new creative public-private partnerships in the provision of water services.

XIII. Investment for water services, infrastructure and management

40. Whether water services are provided by the private sector, the public sector or some creative partnership arrangement, it is clear that significant new capital investment will be required. Countries should mobilize national and local resources and provide incentives to improve water resource protection and water infrastructure construction. Transparent ways and means to facilitate a gradual transition towards maximal cost recovery should be explored. Providing services at affordable prices should also consider the abilities of the poor to purchase these services for their households: subsidies for specific groups, particularly poor people, may have to be considered in some countries.

41. Governments should facilitate access to credit and encourage microcredit development. Public and private investors should be provided with appropriate risk guarantee schemes for the financing of investments. Additionally, external resources should be mobilized: bilateral and multilateral donors should assist countries in formulating and implementing integrated water resources management strategies and target special financial programmes to build water infrastructure in low income areas.

42. Financing the building of infrastructure alone, however, will not achieve the United Nations Millennium Development Goals. Even where the infrastructure is in place, there is no guarantee that the water is safe. New approaches, innovation, and new sources of finance will be needed.

43. The role of what is sometimes referred to as the "informal" water market — those who sell water from portable tanks and bottled water — is often ignored. Also, there are new, low cost technologies for household and point-of-use water purification. A significant role has been identified for small, medium and large companies (often in partnership) to bridge the gap with the consumer (even in rural villages and urban slums) as the medium for short-term distribution and financing.

XIV. Conclusions

44. **The priority given to water, sanitation and human settlements in the Commission on Sustainable Development calendar clearly recognizes that action on these Millennium Development Goals is a precondition for poverty reduction and sustainable development.**

45. **Across the business sector, companies operating internationally, regionally and at the local level are helping communities to find ways to meet these vital goals. Ultimately, the future of every business depends on society's ability to balance growing human demand for land, water and sanitation with ecosystem protection in a way that supports equitable social and economic development.**

46. **The engagement of all sectors — government, civil society and business — is essential to develop options that address prevailing economic, social and ecosystem conditions and available governance, infrastructure, financial, technical and operational resources in different communities around the world.**

47. **Business brings many different skills and resources to the table. It also believes that to help put these to best use the Commission on Sustainable Development should give particular attention to the following areas.**

Leadership and governance

48. **Global targets for water, sanitation and human settlements must be broken down into country targets so that national governments and their partners can engage and contribute effectively to meeting the overall goal. Improved data collection is needed in many countries to provide more consistent measurement and reporting of progress.**

49. **The importance of sanitation in reaching the Millennium Development Goals is under-recognized and consequently given low priority by too many Governments. Initiatives are needed to raise awareness and overcome social and cultural barriers that impair adequate progress on sanitation in some countries.**

50. **Integrated Water Resource Management mechanisms have a central part to play in building strong and effective governance for water and sanitation and in fostering sustainable human settlements. The Commission on Sustainable Development should advocate implementation of Integrated Water Resource Management by member States and promote the establishment of harmonized data capture and management systems. For their part businesses can contribute to Integrated Water Resource Management by analysing how their own activities impact on water throughout the life cycle of their products and processes. They should share their understanding of these impacts and how they can best be managed with local decision makers.**

51. **Land tenure issues associated with rapid urban development can have serious implications for the provision of water and sanitation services to the poor and marginalized. The Commission on Sustainable Development should promote better understanding and appreciation of the need to tackle these issues as a means to enabling provision of improved water and sanitation services to those who most need it.**

Unlocking finance

52. **The biggest challenge to achieving these Millennium Development Goals lies in attracting the levels of finance needed for public and private sector investment in water and sanitation. In urban and peri-urban areas, owing to scale and complexity, service provision generally is administered through municipal or equivalent local authorities. In these environments, investment needs can be met only when effective cost recovery systems are adopted, based on the use of tariffs and taxes that are appropriate for the local social, economic and environmental context.**

53. **The Commission on Sustainable Development should seek ways to promote better understanding, development and adoption of appropriate models for the use of tariffs and taxes as the foundation of sustainable economic management — an essential pillar of sustainable water resource management. This should include the use of public participation mechanisms that enable local communities to articulate how they value water across different options for use.**

54. **Donor organizations should give clear signals that official development assistance will be targeted towards building local capacity for sustainable local economic management as the basis for creating the conditions required to draw significantly higher investment flows into water and sanitation improvement. Through their funding policies donors can underscore the message that access to financial resources goes hand in hand with good governance.**

55. **Where local authorities are willing and able to implement sustainable economic management, the business sector can explore with them alternative financing, investment and service delivery options tailored to local conditions and capacity to meet capital and operational costs.**

Infrastructure and technology

56. **Companies across different business sectors are recognizing that their technologies and business models may offer novel routes to bridging infrastructure gaps and to meeting water and sanitation needs, particularly in poorly served developing countries. Through business-to-business networks and in partnership with public, local and civil society organizations, business resources can be leveraged to:**

- **Transfer knowledge, skills and good practice**
- **Share technologies and cooperate to find ways to accelerate dissemination**
- **Help build local capacity to improve community water and sanitation facilities**
- **Support sustainable growth of small and medium-size enterprises in the domestic economy.**

Effective partnership building

57. **Business shares concern about the scale of the challenge of meeting the Millennium Development Goals for water, sanitation and human settlements. It recognizes that to achieve the necessary rate of progress requires engagement of all sectors of business that can bring different resources and skills to generate new options for communities living under varying social economic and environmental conditions.**

58. **The water and sanitation services sector brings particular technology and management skills that have evolved and adapted to address a diversity of urban and peri-urban conditions over the decades. But today many more companies, from information technology and telecommunications to hygiene and health-care sectors, are developing new partnerships and contributing to building infrastructure that empowers local communities to improve their own lives.**

59. **It is therefore vital that the Commission on Sustainable Development and all major groups taking part recognize the enormous and very diverse contribution that business will make to the development of new and sustainable models for meeting the world's needs for water, sanitation and human settlement. They should actively seek the widest possible engagement from the business sector.**